

INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1998	Park: Shenandoah NP						
Principal Investigator: Catherine Clark	Office Phone: 919-515-7800 Email: catherine_clark@ncsu.edu						
Address: Forest Biotechnology Group 6113 Jordan Hall North Carolina State University Raleigh, NC 27695 NC	Office Fax: 919- 515-7801						
Additional investigators or key field assistants (first name, last name, office phone, office email): <table border="0"> <tr> <td>Name: Dr. Thomas R. Wentworth</td> <td>Phone: 919-515-2168</td> <td>Email: n/a</td> </tr> <tr> <td>Name: Dr. David M. O'Malley</td> <td>Phone: 919-515-7800</td> <td>Email: n/a</td> </tr> </table>		Name: Dr. Thomas R. Wentworth	Phone: 919-515-2168	Email: n/a	Name: Dr. David M. O'Malley	Phone: 919-515-7800	Email: n/a
Name: Dr. Thomas R. Wentworth	Phone: 919-515-2168	Email: n/a					
Name: Dr. David M. O'Malley	Phone: 919-515-7800	Email: n/a					
Permit#: SHEN1998N-225							
Park-assigned Study Id. #: unknown							
Project Title: Genetic Variation In Eastern North American Abies							
Permit Start Date: Jan 01, 1997	Permit Expiration Date Jan 01, 1999						
Study Start Date: Jan 01, 1997	Study End Date Jan 01, 1998						
Study Status: Completed							
Activity Type: Research							
Subject/Discipline: Land Use / Forestry							
Objectives: Evaluate genetic discontinuity of chloroplast microsatellite loci in eastern North American Abies (Fraser, balsam and intermediate fir).							
Findings and Status: Uniparentally inherited cpDNA at microsatellite loci provided evidence of genetic discontinuity in Eastern North American Abies Mill. Genomic DNA was PCR-amplified from 78 individuals representing the geographic ranges of Fraser, balsam and intermediate fir. Gene diversity levels at two loci averaged 0.76 and allele frequencies demonstrated significant departure from homogeneity in chi-square analysis. High levels of population subdivision were shown both in single locus (RST) and haplotype measures (AMOVA). Alleles at the two loci showed non-random distribution in both intermediate (p<0.001) and balsam fir (p<0.055). A chloroplast haplotype network analysis based on allele size distribution and assumptions of a stepwise mutation model revealed two distinct clusters of haplotypes related to geographic distribution.							
For this study, were one or more specimens collected and removed from the park but not destroyed during analyses? Yes							
Funding provided this reporting year by NPS: 0	Funding provided this reporting year by other sources: 0						
Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college							
Full name of college or university:	Annual funding provided by NPS to university or college this reporting year:						

n/a	0
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